



Headquarters U. S. Air Force

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~~Air Force Medical Support Agency/SGOB~~

Air Force Blood Program Division... A New Beginning



- **TSgt Maurice Shaw**
- **9 Mar 04**



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Workgroup Objective

- Transform from cold war based requirements
- Integrate in-garrison and expeditionary assets
- Introduce a modular, building block system
- Reduce footprint and airlift requirements
 - All while still...

Providing blood

- in the ***right amounts***
- to the ***right place***
- at the ***right time***

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CY 2004 Workgroup *Timeline*

■ Report progress to AF/DSG and ASBPO

Phase 1 - Preparation

AFTTP, Allowance
Standard Revision/Equip
evaluation

FY 04-06 FUNDING

POM Planning

Phase 2 - FFF

Ensure
capability
match
requirements

AS
completion
and sourcing

Phase 3 - OTE

Finalize training
opportunities

Equip new UTC

Jan Feb Mar Apr May Jun Jul Aug Sept Oct Nov Dec

Explanations of Phases

Phase 1 Prepare by clearly identifying goals; requirements; AFTTP; AS

Phase 2 Form, Fit, and Function (FFF) complete AS revision; Prototype

Phase 3 Organize, Train and Equip for full wartime mission



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Air Force Blood Program- Readiness Unit Type Codes (UTCs)

- **FIVE (5) BLOOD ASSOCIATED UTCs**
 1. **Blood Transshipment Centers (BTC)**
 2. **Transportable Blood Transshipment Centers (TBTC)**
 - ***NOTE: The BTC and TBTC will be combined, re-engineered and renamed to reflect:***
 - ***Blood Transshipment System Module 1***
 - ***Blood Transshipment System Module 2***
 - ***Blood Transshipment System Module 3***
 3. **CONUS/OCONUS Blood Donor Centers (BDC)**
 4. **Armed Services Whole Blood Processing Lab (ASWBPL)**
 5. **Frozen Blood Teams (FFBD1)**



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Langley's TBTC - 44 Tons



44 Tons

19 Pallet Spaces

12 Members

Wrong AFSC Mix!

No Flexibility!

Not
Expeditionary!

NO MORE!

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Blood Trans-Shipment System (BTS)

The New Theater Blood Trans-Shipment Systems

- *Blood Transshipment System Module 1*
 - *3 Members/1 Pallet/500 RBCs & 40 FFP*
- *Blood Transshipment System Module 2*
 - *6 Members/2 more Pallets/1000 RBCs & 40 FFP*
- *Blood Transshipment System Module 3*
 - *9 Members/2 More Pallets/2500 RBCs & 80 FFP*
- **Please note the equipment/supply list are just placeholders, but the concept is concrete.**
- **The personnel pictured are just medics, not lab personnel.**



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Blood Trans-Shipment System (BTS) Overview - Module 1

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Mission Capabilities

- Operational within 6-hours of site arrival
- Max Daily liquid RBCs is 500 units
- Max Daily FFP capacity is 40 - 60 units
- Provide blood to meet theater needs
- Intermediate transshipment center
 - re-icing, shipping and storage facilities

Equipment/Supply Consideration

- 2 - Refrigerators total Capacity of 500 liquid RBCs
- 1 - Freezer total Capacity of 40-60 FFP
- 2 - Ice Makers Capacity of 1162 lbs of wet ice daily
- Portable Diesel Generator Surge Protectors
- Tent/Shelter Dolly
- TDBSS and other Info Systems Manual

TITLE	AFSC	GRADE	QUANTITY
EMEDS Bank Officer	043T3A	Lt/Capt	0
Joint Blood Program Component			1
Requires ECS; possible bldg of opportunity			
Med Materiel JNMN	4A 151	SrA/SSgt	1
Medical Lab Specialist	4T051	SrA/SSgt	1
Health Service Management JNMN	4A 051	SrA/SSgt	0
MERC	4A 251	SSgt	0
Total Personnel			3



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Blood Trans-Shipment System (BTS) - *Module 1*

Mission Capabilities

1. Operational within **6-hours** of site arrival
2. Max Daily liquid RBCs is **500 units**
3. Max Daily **FFP** capacity is **40 - 60 units**
4. Provide blood to meet theater needs
5. Intermediate transshipment center
 - re-icing, shipping and storage facilities
6. Located at major airfields and/or EMEDS
7. Joint Blood Program Component
8. Requires ECS; possible bldg of opportunity



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Blood Trans-Shipment System (BTS) - Module 1

BTS Module 1 Personnel Package



- 24 hour capability
- 3 Team Members
 - 1 Senior Lab Tech
 - Now Team Chief*
 - 1 Lab Tech Journeyman
 - 1 Med Log Journeyman

TITLE	AFSC	GRADE	QUANTITY
Blood Bank Officer	043T3A	Lt/Capt	0
*MedLab Craftsman	4T071	MSgt	1
Med Lab Craftsman	4T071	TSgt	0
Med Materiel JNMN	4A151	SrA/SSgt	1
Medical Lab Specialist	4T051	SrA/SSgt	1
Health Service Management JNMN	4A051	SrA/SSgt	0
MERC	4A251	SSgt	0
Total Personnel			3

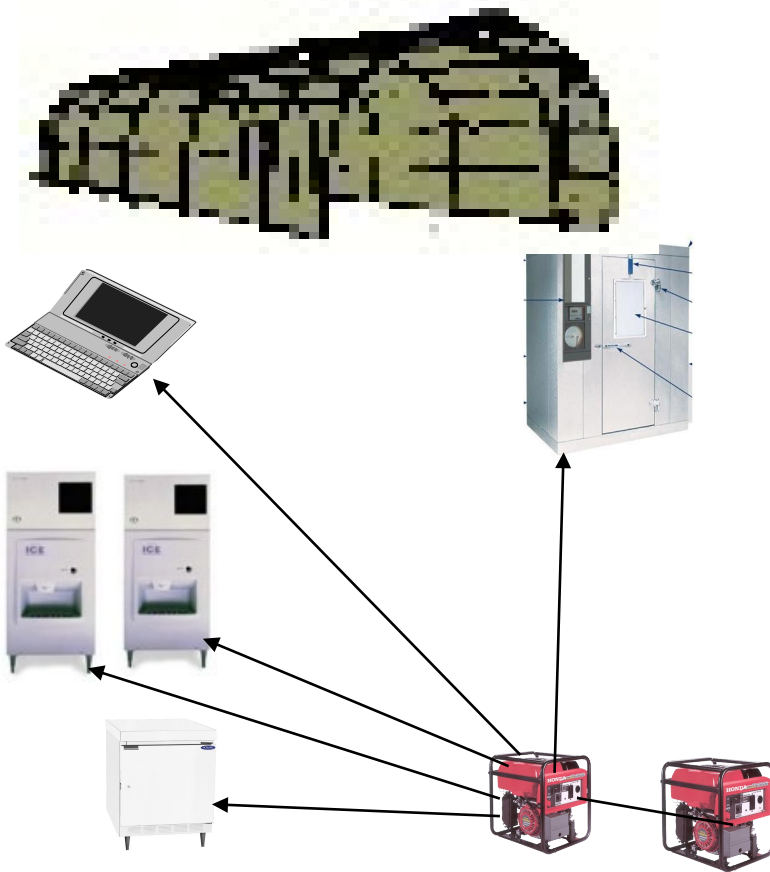
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Blood Trans-Shipment System (BTS) - Module 1

Equipment Considerations



- 1 - Shelter - Alaskan Tent comparable to EMEDS concept or building of opportunity
 - 1 - 10'x20' space
 - Amps _____
- 1 - Refrigerator 110 - 220 V/50-60 Hz
 - Capacity of 500 units of RBCs @ 1-6 C
 - FDA Approved with Validation Certificate
 - Amps _____
- 1 Under counter Freezer 110- 220V/ 50-60Hz
 - Capacity of 40-60 units of FFP @ < -18 C
- 2 - Ice Machines 110 - 220V/50-60 Hz
 - Ea must produce 1162 lbs of cube ice daily
 - Amps _____
- 1 TDBSS 110- 220V/ 50-60Hz
 - Printer/Handheld Scanner/FTP/SIPR
- 2 Sm Portable Diesel Generators
 - Output 110V/50-60 Hz
 - Amp Output Capacity _____
- Environmental Control Units (ECU)
 - 1-2 supplied by Base Operating System



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Blood Trans-Shipment System (BTS) - Module 1

Other Supply Considerations

- **Prep Station/Table**
- **Dolly(s)**
- **Shipping Boxes (Collins?)**
- **Chux**
- **Thermometers**
- **Manual Forms (COOP)**
- **Thick Plastic Ice Bags**
- **Bag Ties**
- **Surge Protectors**
- **Diesel Can with Credit card**
- **2-way radio**
- **GPS**
- **Lighting**
- **Ice Scoop**



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Blood Trans-shipment System (BTS) Overview - Module 2

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Mission Capabilities

- Operational within 12-hours of site arrival
- Max Daily liquid RBCs is 1000 units
- Max Daily FFP capacity is 40 - 60 units
- Provide blood to meet theater needs
- Intermediate transshipment center
 - re-icing, shipping and storage facilities

Equipment/Supply Consideration

- 2 - Refrigerators total Capacity of 1000 liquid RBCs
- 1 - Freezer total Capacity of 40-60 FFP
- 2 - Ice Makers Capacity of 1162 lbs of wet ice daily ea
- Portable Diesel Generator Surge Protectors
- Tent/Shelter Dolly
- TDBSS/other Info Systems Manual Forms

TITLE	AFSC	GRADE	QUANTITY
Blood Bank Officer	043T3A	Lt/Capt	1
Joint Blood Program Component	043T3A	Lt/Capt	1
Requires ECS, possible bldg of opportunity	043T3A	Lt/Capt	0
Med Materiel JNMN	4A 151	SrA/SSgt	1
Medical Lab Specialist	4T051	SrA/SSgt	2
Health Service Management JNMN	4A 051	SrA/SSgt	0
MERC	4A 251	SSgt	1
Total Personnel			6

**Data based on open Source information



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Blood Trans-shipment System (BTS) - Module 2

Mission Capabilities

- Operational within **12-hours** of site arrival
- Max Daily liquid **RBCs** is **1000 units**
- Max Daily **FFP** capacity is **40 - 60 units**
- Provide blood to meet theater needs
- Intermediate transshipment center
 - re-icing, shipping and storage facilities
- Co-located at major airfields and/or EMEDS

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Joint Blood Program Component

**Data based on open Source information



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Blood Trans-Shipment System (BTS) - Module 2

BTS Module 2 Personnel Package



TITLE	AFSC	GRADE	QUANTITY
Blood Bank Officer	043T3A	Lt/Capt	1
Med Lab Craftsman	4T071	MSgt	1
Med Lab Craftsman	4T071	TSgt	0
Med Materiel JNMN	4A151	SrA/SSgt	1
Medical Lab Specialist	4T051	SrA/SSgt	2
Health Service Management JNMN	4A051	SrA/SSgt	0
MERC	4A251	SSgt	1
Total Personnel			6



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Blood Trans-shipment System (BTS) - Module 2

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Equipment Considerations



- 3 - Refrigerators total Capacity of 1000 liquid RBCs
- 2 - Freezer total Capacity of 40-60 FFP
- 3 - Ice Makers Capacity of 1162 lbs of wet ice daily ea
- Portable Diesel Generator
- Surge Protectors
- Tent/Shelter
- Manual Forms
- Prep Station
- Thermometers
- Shipping Boxes
- Chux
- Dolly
- TDBSS/other Info System

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**Data based on open Source information



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Blood Trans-Shipment System (BTS) - Module 2

Other Supply Considerations

- **Prep Station/Table**
- **Dolly(s)**
- **Shipping Boxes (Collins?)**
- **Chux**
- **Thermometers**
- **Manual Forms (COOP)**
- **Thick Plastic Ice Bags**
- **Bag Ties**
- **Surge Protectors**
- **Diesel Can with Credit card**
- **2-way radio**
- **GPS**
- **Lighting**
- **Ice Scoop**



Blood Trans-shipment System (BTS) - Module 3

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Mission Capabilities

- Operational within 12-hours of site arrival
- Max Daily liquid RBCs is 2500 units
- Max Daily FFP capacity is 80-120 units
- Provide blood to meet theater needs
- Intermediate transshipment center
 - re-icing, shipping and storage facilities

Equipment/Supply Considerations

- 3 - Refrigerators total Capacity of 2500 liquid RBCs
- 2 - Freezer total Capacity of 80-120 FFP
- 3 - Ice Makers Capacity of 1162 lbs of wet ice daily ea
- Portable Diesel Generator Surge Protectors
- Tent/Shelter Dolly
- TDBSS/other Info Systems Manual Forms

TITLE	AFSC	GRADE	QUANTITY
EMEDS Med Bank	043T3A	Lt/Capt	1
Joint Blood Program Component			
Med Lab	4T071	MSgt	1
Med Lab	4T071	TSgt	1
Med Materiel JNMN	4A 151	SrA/SSgt	1
Medical Lab Specialist	4T051	SrA/SSgt	3
Health Service Management JNMN	4A 051	SrA/SSgt	1
MERC	4A 251	SSgt	1
Total Personnel			9

**Data based on open Source information



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Blood Trans-shipment System (BTS) - *Module 3*

Mission Capabilities

- Operational within **12-hours** of site arrival
- Max Daily liquid RBCs is **2500 units**
- Max Daily FFP capacity is **80 - 120 units**
- Provide blood to meet theater needs
- Intermediate transshipment center
 - re-icing, shipping and storage facilities
- Co-located at major airfields and/or EMEDS
- Joint Blood Program Component
- Requires ECS; possible bldg of opportunity



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Blood Trans-Shipment System (BTS) - Module 3

BTS Module 3 Personnel Package



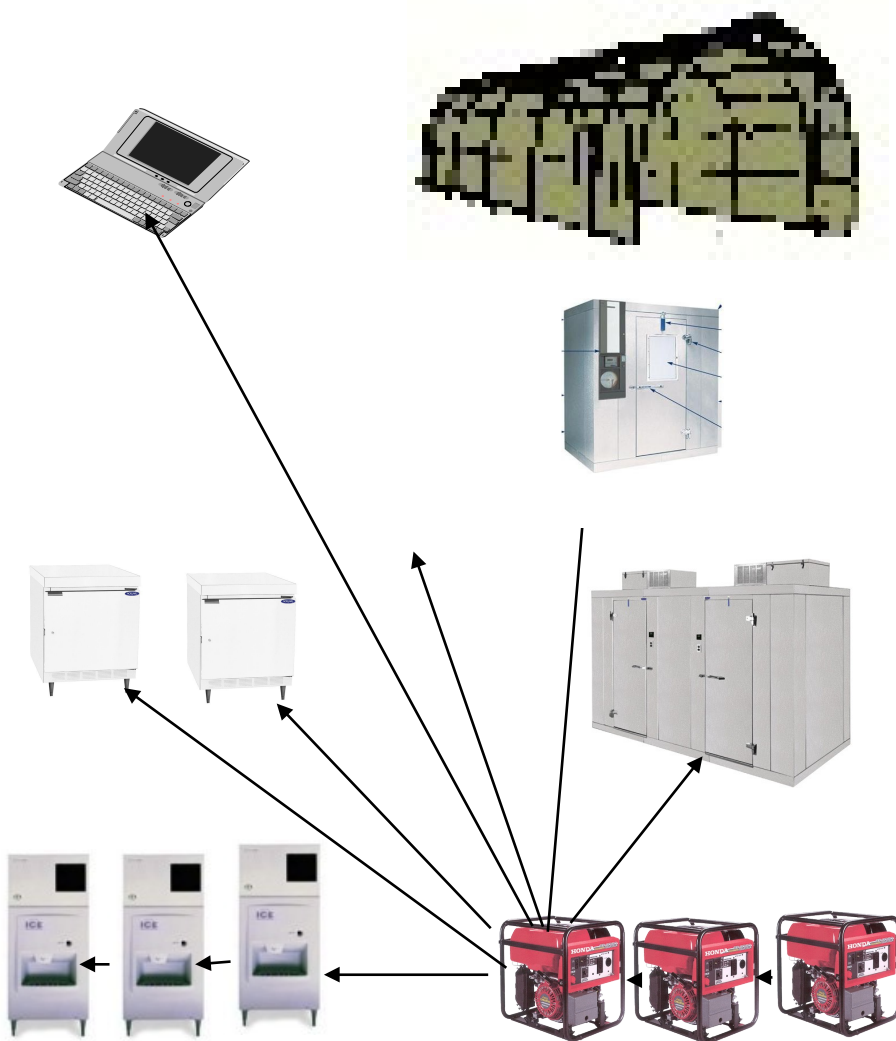
TITLE	AFSC	GRADE	QUANTITY
Blood Bank Officer	043T3A	Lt/Capt	1
Med Lab Craftsman	4T071	MSgt	1
Med Lab Craftsman	4T071	TSgt	1
Med Materiel JNMN	4A 151	SrA/SSgt	1
Medical Lab Specialist	4T051	SrA/SSgt	3
Health Service Management JNMN	4A 051	SrA/SSgt	1
MERC	4A 251	SSgt	1
Total Personnel			9



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Blood Trans-shipment System (BTS) - Module 3

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Equipment/Supply Considerations

- 1 - Shelter - Alaskan Tent comparable to EMEDS concept or building of opportunity
 - 1 - 10'x20' space
 - Amps _____
- 3 - Refrigerator 110 - 220 V/50-60 Hz
 - Capacity of 2500 units of RBCs @ 1-6 C
 - FDA Approved with Validation Certificate
 - Amps _____
- 2 Under counter Freezer 110- 220V/ 50-60Hz
 - Capacity of 80-120 units of FFP @ < -18 C
- 3 - Ice Machines 110 - 220V/50-60 Hz
 - Ea must produce 1162 lbs of cube ice daily
 - Amps _____
- 1 TDBSS 110- 220V/ 50-60Hz
 - Printer/Handheld Scanner/FTP/SIPR
- 3 Sm Portable Diesel Generators
 - Output 110V/50-60 Hz
 - Amp Output Capacity _____
- Environmental Control Units (ECU)
 - 1-2 supplied by Base Operating System

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Blood Trans-Shipment System (BTS) - *Module 3*

Other Supply Considerations

- Prep Station/Table
- Dolly(s)
- Shipping Boxes (Collins?)
- Chux
- Thermometers
- Manual Forms (COOP)
- Thick Plastic Ice Bags
- Bag Ties
- Surge Protectors
- Diesel Can with Credit card
- 2-way radio
- GPS
- Lighting
- Ice Scoop



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Air Force Blood Program - Readiness Remaining Unit Type Codes (UTCs)

■ **FIVE (5) BLOOD ASSOCIATED UTCs**

1. **Blood Transshipment Centers (BTC)**
2. **Transportable Blood Transshipment Centers (TBTC)**
 - ***NOTE: The BTC and TBTC will be combined, re-engineered and renamed to reflect:***
 - **Blood Transshipment System Module 1**
 - **Blood Transshipment System Module 2**
 - **Blood Transshipment System Module 3**
3. **CONUS/OCONUS Blood Donor Centers (BDC) - TBD**
4. **Armed Services Whole Blood Processing Lab (ASWBPL) - TBD**
5. **Frozen Blood Teams (FFBD1) - PACOM Blood Conf 14-19 June 04**



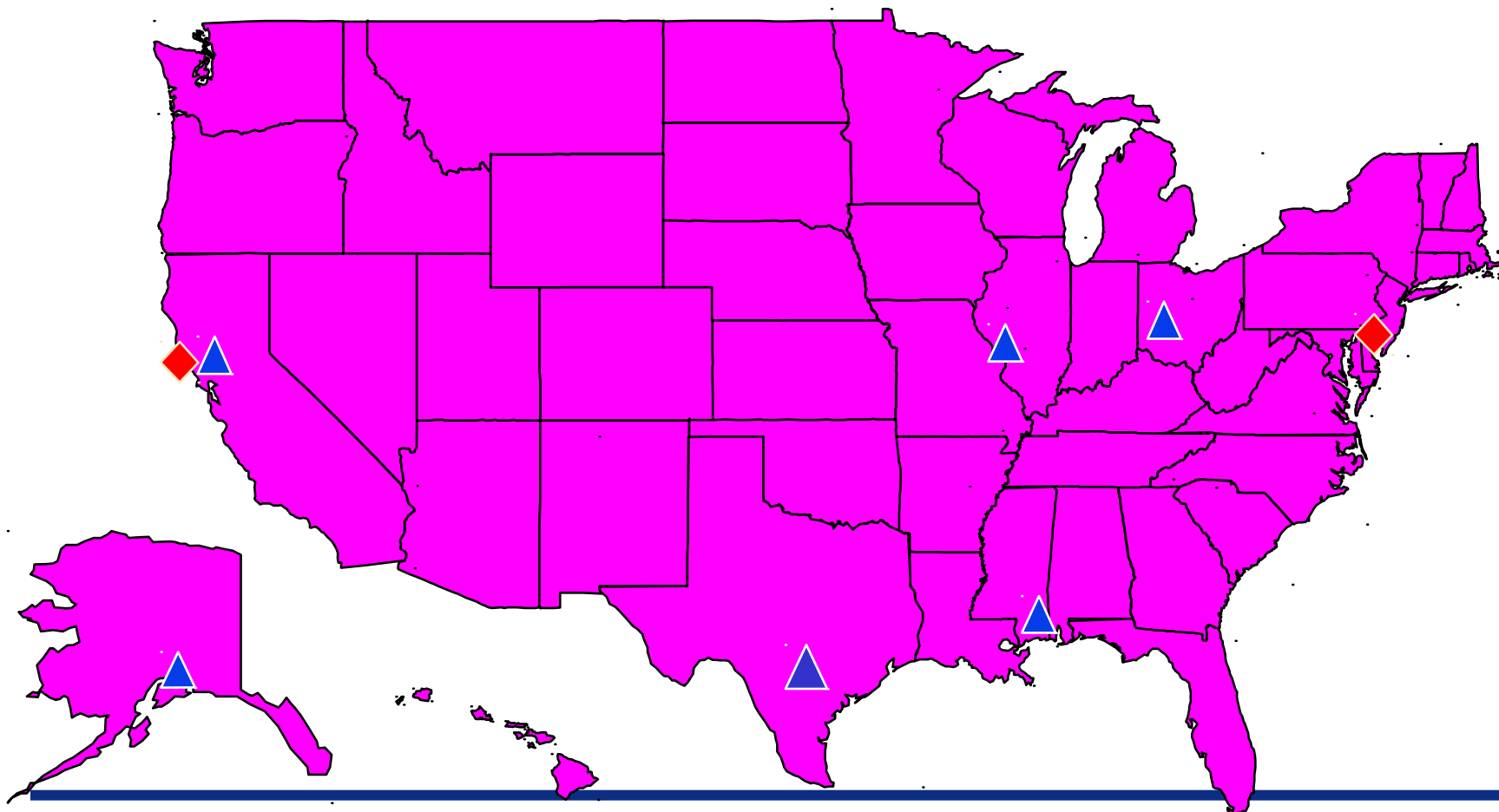
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AF BLOOD DONOR CENTERS: FFLGC/FFBZZ

◆ ASWBPL 2

▲ USAF 7

OCONUS BDC Lakenheath AB,
UK



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AF BLOOD DONOR CENTERS: FFLGC/FFBZZ

- **Allowance Standard 893 will be reviewed/revised to include WRM**
- **Mission Capabilities statement written**
- **Wartime Operations documented into AFTTP Chap**
- **Combine UTCs FFLGC OCONUS BDC and FFBZZ CONUS to FFLGC to Blood Donor Center**
- **Identify new standardized donor staffing plan**
 - **Clearly identify augmentation plans for wartime surge**



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Armed Services Whole Blood Processing Laboratory



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Armed Services Whole Blood Processing Laboratory

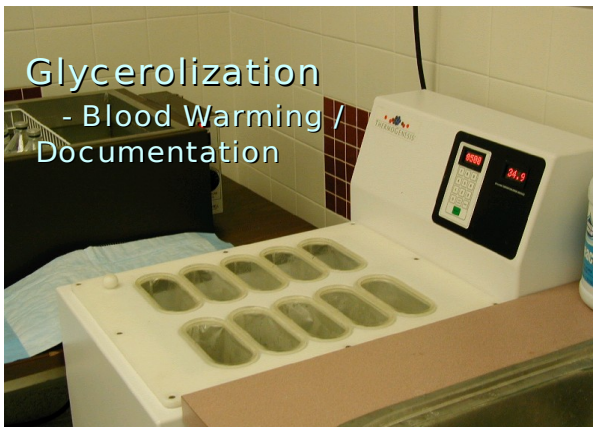
- **Allowance Standard 893 will be reviewed/revised to include WRM**
- **Mission Capabilities statement written**
- **Wartime Operations documented into AFTTP Chap**
- **Peacetime considerations for new Frozen Blood program**
- **New Staffing plan identified augmentation plans from Tri-Service**
 - **Increased workload without new staffing to compensate**
 - **Surge workload should trigger surge staffing; redefine trigger**
 - **Clearly identify augmentation plans for wartime surge**



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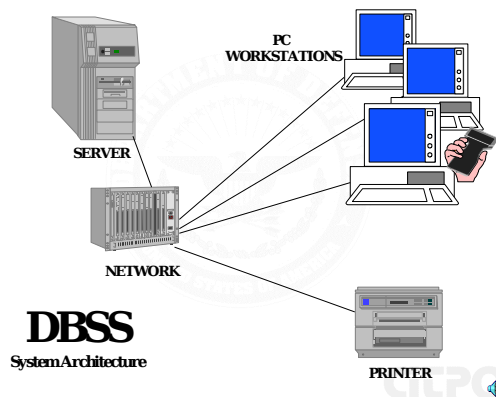
Frozen Blood Teams FFBD1

Glycerolization
- Blood Warming /
Documentation



Glycerolization

• Storage



Software Upgrade Improvements



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Frozen Blood Teams

FFBD1

- **Allowance Standard 893 will be reviewed/revised to include WRM**
- **Mission Capabilities statement written**
- **Wartime Operations documented into AFTTP Chapter**
- **Replace TDBSS with Fixed DBSS to better manage FRBC inventory;**
 - **Backed up nightly**
 - **Can be sent to JMAR for ASBPO oversight/planning**
- **A portable DBSS platform may need to be used; ie scanning EOS with docking station**



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Air Force Blood Program- Readiness Unit Type Codes (UTCs)

Summary

***A full review, revision, and rewrite of
Allowance Standards, MISCAPS, Personnel
Packages, and AFTTPs will be conducted on:***

FOUR (4) AF BLOOD ASSOCIATED UTCs

- 1. Blood Transshipment System**
 - ***Blood Transshipment System Module 1***
 - ***Blood Transshipment System Module 2***
 - ***Blood Transshipment System Module 3***
- 2. CONUS/OCONUS Blood Donor Centers (BDC)**
- 3. Armed Services Whole Blood Processing Lab (ASWBPL)**
- 4. Frozen Blood Teams (FFBD1)**



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Questions?

Questions?

Questions?